



From: エカミルテクノロジ(株)国際G 0426+42+9378  
From: MUSERLIAN, LUCAS and MERCANTI 1 212 661 8002

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re Application of: A. NAKAJIMA, et al : Art Unit: 2873

Serial No. : 10/658,253

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Examiner: T.

Filed : September 9, 2003

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Title : SILVER SALT PHOTOTHERMO-  
GRAPHIC DRY IMAGING  
MATERIAL

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DECLARATION

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

S i r:

I, Akihisa Nakajima, hereby declare and say as follows:

1. I am one of the inventor's in the above-identified patent Application.

2. I received a Master's degree in synthetic chemistry from Osaka University in March 1987. Since April of 1987, I have been employed by Konica Corporation (now Konica Minolta Medical & Graphic, Inc.), the Assignee of the above-identified patent Application. During my employment at Konica, I engaged in the research and development of supports for photothermographic imaging materials.
3. I am aware that the above-identified patent Application has been rejected based on Sampei (US 6,190,854). Tests have been performed and are reported herein to demonstrate the superior effects of the copolymers of the present invention compared to the copolymers of Sampei. These tests have been performed either by myself or under my direct supervision and control.
4. Copolymers FS-5 and FS-6 in Table 1 at col. 19 of Sampei were chosen as Comparative Examples since they contain compound A-17 of Sampei and are considered to be similar to the copolymer of the present invention. Copolymers FS-5 and FS-6 were prepared in the conventional manner known in the art.

5. Coating Compositions C-FS5 and C-FS6 were prepared in accordance with the preparation method described at page 60, line 23 to page 61, line 16 of the Application, except that copolymers FS-5 and FS-6 were respectively employed as the copolymer.
6. Coating Compositions C-FS5 and C-FS6 were respectively used to prepare Comparative Samples S-FS5 and S-FS6 in the same manner as the samples of Example 1 of the Application. The composition of Samples S-FS5 and S-FS6, as well as the composition of Inventive Samples 10-15 of Table 2 at page 77 of the Application, are shown in Table A2. Table A2 demonstrates that Inventive Samples 10-15 each contain a fluorine containing acrylate or fluorine containing methacrylate compound (Formula 1) as well as a monomer having a hydrophobic group in the molecule (Formula 2). In contrast, Comparative Samples S-FS5 and S-FS6 contain compound A-17 of Sampei which does not satisfy Formula 1 of the invention since "n" of compound A-17 is not 1 to 4.

Table A2

Sample No.	FORMULA 1				FORMULA 2				
	M-5210	M-1210	R-1420	A-17 Sample	NMA	CHMA	GMA	C-18 Sample	D-4 Sample
10			20.0			80.0			
11			25.0			75.0			
12			33.0			67.0			
13			50.0			50.0			
14			67.0			33.0			
15			33.0			57.0	10.0		
S-FS5				60				40	
S-FS6				60					40

7. Samples S-FS5 and S-FS6 were evaluated for electrostatic charge, adhesion at high temperature and adhesion at high humidity as described at pages 73-76 of the Application. The results of these evaluations, including the evaluation results for Inventive Samples 10-15 listed in Table 2 at page 77 of the Application, are shown in Table A. In addition, Table A shows evaluation results for the coating characteristics of

the back coating (BC) layer of Comparative Samples S-FS5, S-FS6 and Inventive Samples 10-15.

Table A

Sample No.	Evaluation			
	Amount of Electric charge	Adhesion at high temperature	Adhesion at high humidity	Coating Characteristics
10	0.15	5	4	5
11	0.05	4	5	5
12	0.00	4	5	5
13	0.00	4	5	5
14	0.00	4	5	5
15	0.00	5	5	5
S-FS5	2.20	4	4	2
S-FS6	2.50	4	4	2

8. Table A demonstrates that Comparative Samples S-FS5 and S-FS6 containing the copolymer of Sampei exhibited a high amount of electric charge, a high degree of adhesion at high temperature and a high degree of adhesion at high humidity compared to Inventive Samples 10-15 containing the copolymer of the present invention. Furthermore, obvious phase-separation was observed on the coated surface of Comparative Samples

S-FS5 and S-FS6, while no phase-separation was observed for Inventive Samples 10-15.

9. Table A therefore demonstrates that a superior photothermographic material is produced by the present invention compared to the teachings of Sampei. I believe that one of skill in the art would find these results to be surprising and unexpected.

It is declared by undersigned that all statements made herein of undersigned's own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the U.S. Code; and that such willful false statements may jeopardize the validity of this Application or any patent issuing thereon.

Akihisa Nakajima  
Akihisa Nakajima

Dated: This 22th day of March, 2005.